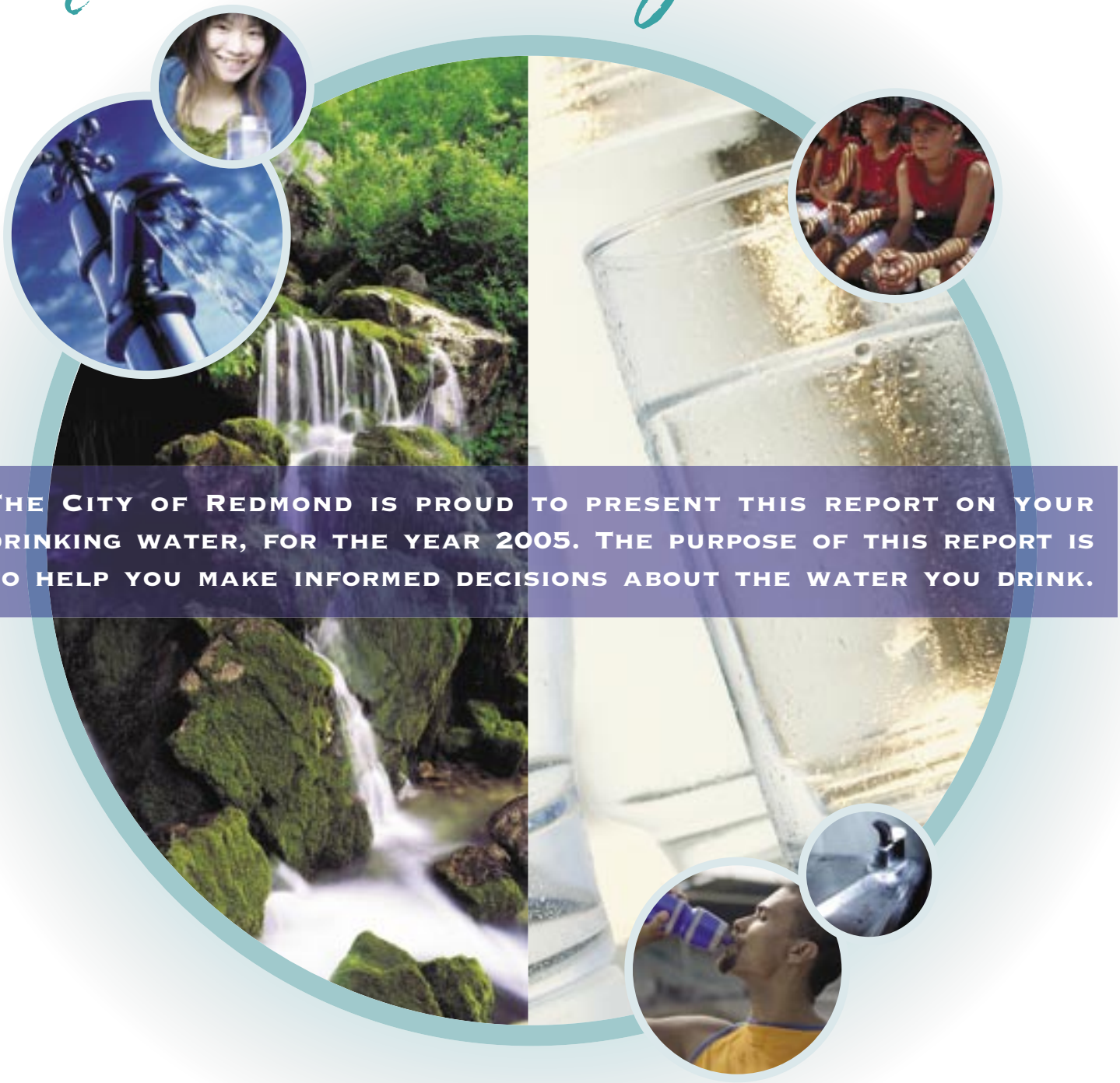
CITY OF REDMOND, WASHINGTON

SUMMER 2006

WATER QUALITY REPORT

Your Drinking Water

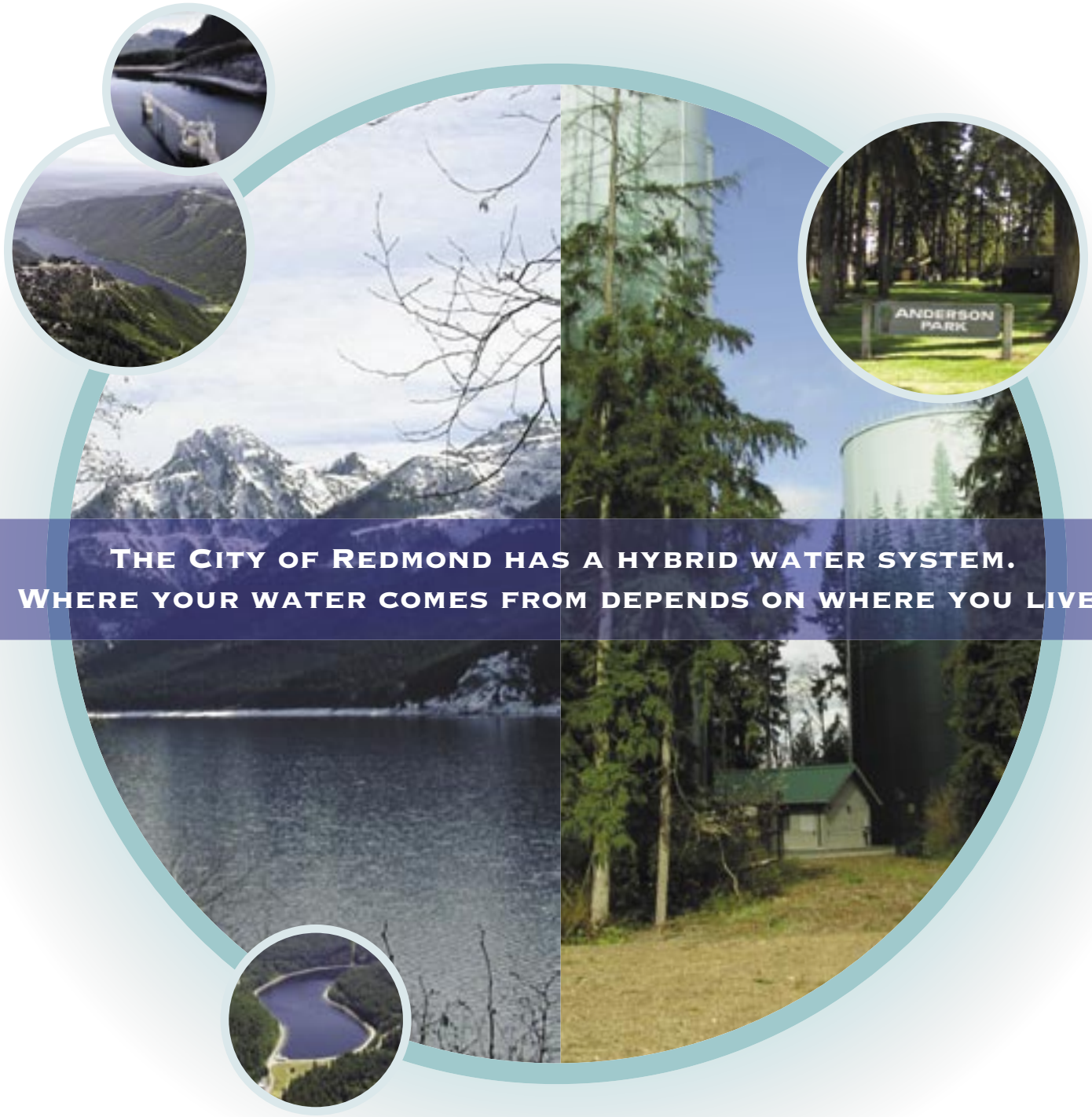


The City of Redmond is proud to present this report on your drinking water, for the year 2005. The purpose of this report is to help you make informed decisions about the water you drink.

In this report you will learn where your water comes from, what is in your tap water, how your tap water is protected, treated and monitored and how you can become involved in decisions affecting your drinking water.

Safe Drinking Water is Our Highest Priority!

"Water is one of life's most fragile necessities,



The City of Redmond has a hybrid water system. Where your water comes from depends on where you live.

THE TOLT WATERSHED

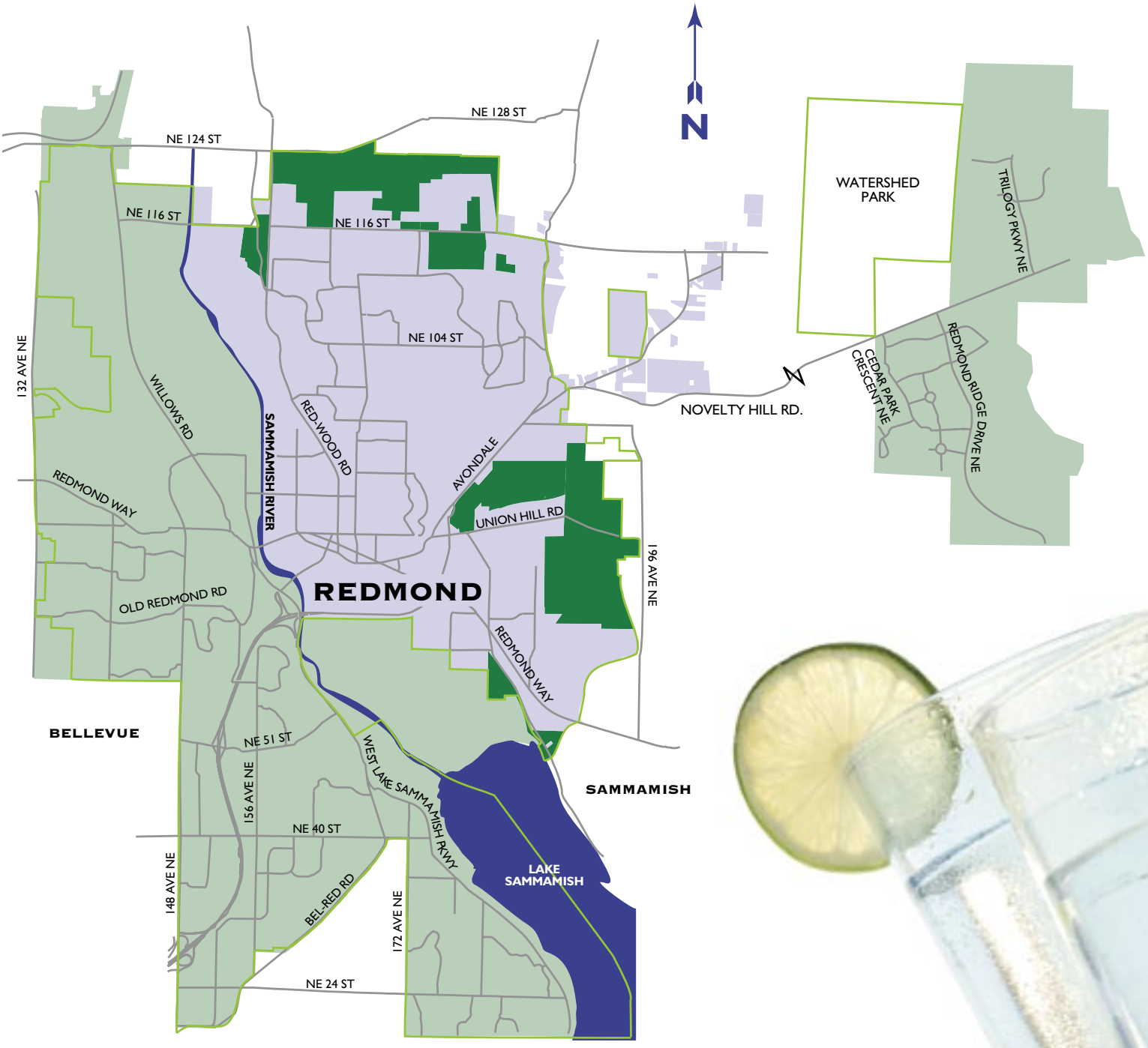
Residents on the west side of Lake Sammamish and the river, and in Redmond Ridge and Trilogy are served water that comes from the Tolt Watershed in the Cascade Mountains.

THE GROUNDWATER SYSTEM

Residents east of the lake and river are supplied groundwater from the City's well system. Depending on demand conditions, Tolt water can be blended into the groundwater.

and to take it for granted is to neglect it."

–William Ashworth



WHERE DOES MY WATER COME FROM?

CASCADE WATER ALLIANCE

Tolt Watershed Water

Groundwater

Private Well Water

South Fork of the Tolt River

ALL COMPOUNDS FROM THE TOLT SYSTEM MEET STRICT FEDERAL AND STATE STANDARDS.

THE TOLT WATERSHED

"From the Cascade Mountains to Your Tap"

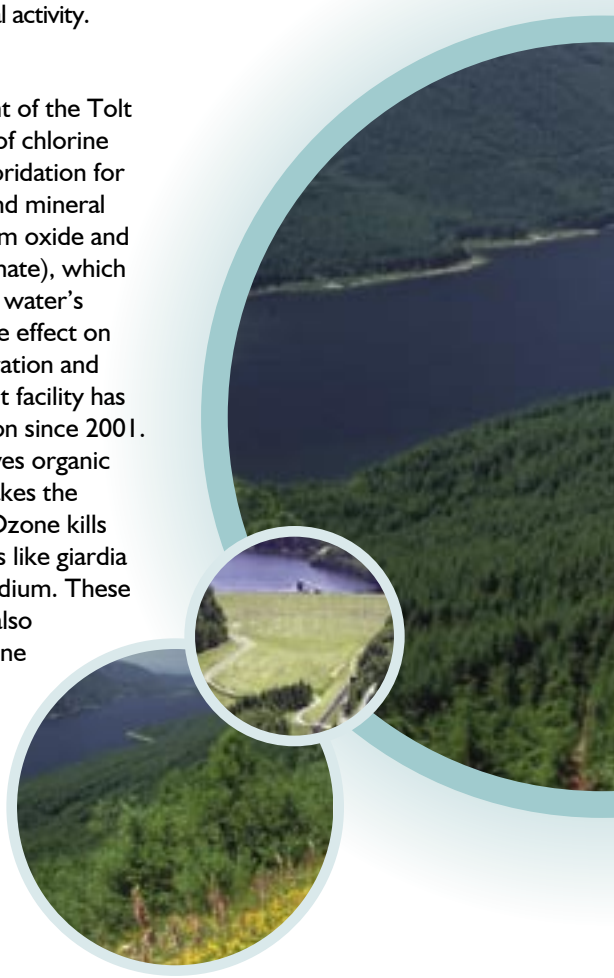
The Tolt Reservoir and Watershed are located 15 miles east of Redmond in the Cascade Mountains. Rivers, streams and snowmelt are impounded here to make up the reservoir supply. The water travels through a supply pipeline to Redmond and other eastside cities and water districts on its way to Seattle. The Watershed and pipeline are owned by the City of Seattle. Redmond, as a member of the Cascade Water Alliance, buys this water and both cities monitor and test it to maintain quality.

Watershed Protection

The Tolt Watershed covers nearly 14,000 acres and is closed to public access. Seattle's aggressive watershed protection plan safeguards the water supply from degradation and human intrusion. The Washington State Department of Health has determined the Watershed to have low vulnerability to sources of contamination. Contamination that might occur would most likely be from soil erosion or animal activity.

Treatment

Water treatment of the Tolt supply consists of chlorine disinfection, fluoridation for dental health, and mineral additives (calcium oxide and sodium bicarbonate), which help reduce the water's natural corrosive effect on plumbing. A filtration and ozone treatment facility has been in operation since 2001. Filtration removes organic material and makes the water clearer. Ozone kills tough pathogens like giardia and cryptosporidium. These improvements also mean less chlorine is needed for disinfection.



2005 Water Quality Data–Tolt System

Detected Compounds	Units	Levels		EPA Limits		Typical Sources
		Average	**Range**	**MCLG**	**MCL**	
FLUORIDE	ppm	1.0	0.8–1.1	4	4	Additive to promote dental health
CRYPTOSPORIDIUM*	#/100	nd	nd–2	NA	NA	Intestinal parasite of mammals
TURBIDITY	NTU	0.05	0.02–0.14	NA	TT	Soil runoff
TTHM	ppb	39.1	34.2–46	NA	80	By-products of chlorination disinfection
HAA5	ppb	24	19.8–28.8	NA	60	By-products of chlorination disinfection
CHLORINE	ppm	0.59	0–1.30	NA	4 MRDL	Additive that kills germs

* Cryptosporidium data is from raw water prior to any treatment. Treatment effectively removes this pathogen.

MCLG (maximum contaminant level goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

MCL (maximum contaminant level): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

MRDL (maximum residual disinfectant level)

PPM (Parts Per Million) = 1 ppm = 1 mg/l

THE GROUNDWATER SYSTEM

"Buried Treasure"

In Redmond, east of the Sammamish River, there are underground, water bearing formations called aquifers. Over the past 50 years these aquifers have supplied nearly 40% of Redmond's drinking water. In 2005 the City's wells pumped 784 million gallons from the aquifers. This resource is listed by the Department of Health as having high vulnerability to potential contamination, because the aquifers are only 50 feet deep.

Groundwater Protection

In 2003 Redmond's City Council passed the Wellhead Protection Ordinance. The Ordinance was adopted after years of studying the characteristics of the aquifers that supply our groundwater. Time of travel zones have been determined. These zones delineate areas that contribute to aquifer recharge, and consequently are areas of concern in the event of a contaminant spill. Activities in these zones are monitored by Redmond's Division of Natural Resources. Storage and use of contaminants that could threaten the aquifer are strictly regulated. To learn more contact Kevin Murphy, Natural Resources Wellhead Protection Program Lead at 425-556-2756 or kmurphy@redmond.gov.

Treatment

Redmond groundwater is treated with 3 common drinking water additives: sodium fluoride, sodium hydroxide, and chlorine disinfection. Fluoride contributes to dental health. Sodium hydroxide raises the pH of the water, thereby making it less corrosive to household plumbing. Chlorine acts as a safety net against disease-causing germs called pathogens.

Annual hydrant flushing freshens your drinking water.

All compounds from the Groundwater System meet strict federal and state standards.

2005 Water Quality Data–Groundwater System

Detected Compounds	Units	Levels		EPA Limits		Typical Sources
		Average	**Range**	**MCLG**	**MCL**	
FLUORIDE	ppm	1.18	0.14–1.60	4	4	Additive to promote dental health
NITRATE	ppm	1.02	0–1.6	10	10	Erosion from natural deposits
ARSENIC	ppb	0.6	0–2	0	10	Erosion from natural deposits
TTHM	ppb	24	10–46	NA	80	By-products of chlorine disinfection
HAA5	ppb	10	1–27	NA	60	By-products of chlorine disinfection
CHLORINE	ppm	0.49	.05–1.07	NA	4 MRDL	Additive that kills germs
TOTAL COLIFORM	% positive	<1%	1 out of 770	0	5%	Naturally present in the environment

PPB (Parts Per Billion) = 1 ppb = 1 ug/l

NTU A measurement of water clarity. High turbidity can interfere with disinfection.

T.T. (treatment technique): A required process intended to reduce the level of a contaminant in drinking water.

TTHM: (total trihalomethane) disenfection by-products.

HAA5: (Haleoacetic acid) disenfection by-products.

NA: Not Applicable.

KEEPING THE LEAD OUT

There is no detectable lead or copper in any of the sources of Redmond drinking water. Detection of lead and copper in Redmond tap water would come from corrosion of plumbing pipes and fixtures in the home. Flushing the tap for a minute or two clears the pipes and brings in water from the main where lead is rarely present. Redmond's water is treated to minimize corrosion in the home and a testing program has been in effect since 1992, making sure treatment is effective. **Next testing period begins June 2006.**

2003 Lead and Copper City-wide Monitoring Program

COMPOUNDS & UNITS	MCLG	90th Percentile Action Level*	90th Percentile Residential Level	# of Homes Exceeding Action Level*	Sources
LEAD (ppb)	0	15 ppb	5 ppb	2 out of 39	Corrosion of household plumbing
COPPER (ppm)	1.3 ppm	1.3 ppm	0.34 ppm	1 out of 39	Corrosion of household plumbing

*ACTION LEVEL: T

REDMOND'S WATER SUPPLIES ARE REMARKABLE FOR THEIR PURITY.

To assure this high standard, thousands of water samples are taken and tested annually from areas throughout the system. Certified laboratories look for traces of chemicals, pesticides, herbicides, bacteria, viruses, and metals.

pH and Why It's Important

The pH of water tells you how acidic or basic it is. Numbers below 7 are increasingly acidic and numbers above are more basic. Redmond drinking water is pH adjusted to make the water less acidic and therefore less likely to corrode plumbing materials like lead or copper.

***Tolt Water pH**=7.9–8.4* ***Well System pH**=7.3–7.8*

Hard Water & Soft Water

Water becomes "harder" with an increase in minerals like calcium and magnesium. Surface water has fewer minerals in it than groundwater.

***Tolt Water Hardness**=29 mg/l as $CaCO_3$ or 1.7 grains per gallon (soft water)*

***Well System Hardness**=60–100 mg/l as $CaCO_3$ or 3.5–6 grains per gallon (medium hard water)*

What's A Dip Tube?

Many water heaters built from 1993–1997 have a defective internal part called a dip tube. The dip tube breaks down and releases small, off-white, non toxic particles that end up in your faucet screens and cause a noticeable reduction in flow and pressure. Call the water heater's manufacturer or a plumber to remedy this problem, or call us at 425-556-2847 for more information.

Water Filters

Installing a water filter is a personal decision that gives some people a greater sense of security. Although Redmond drinking water meets all federal and state safety standards, the right water filter can remove trace substances that may concern some people. But not all filters are created equally nor do they remove the same things. NSF International (www.nsf.org) and Water Quality Association (www.wqa.org) can help you choose the right treatment device.

IMPORTANT INFORMATION FROM THE EPA ABOUT ALL DRINKING WATER

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and can pick up substances resulting from the presence of animal or human activity.

Substances and contaminants that could be present in source water include:

Microbes such as viruses and bacteria, which may come from septic systems, livestock and wildlife.

Inorganic chemicals such as salts and metals, which may be naturally occurring or result from urban stormwater runoff, wastewater discharges and farming.

Pesticides and herbicides from agriculture, urban stormwater runoff and residential uses.

Organic chemicals both synthetic and volatile, which are by-products of industry and can also come from gas stations, dry cleaners, urban stormwater runoff, and septic systems.

Radioactive contaminants, which can be naturally occurring or result from petroleum production or mining activities.

In order to insure the safety of tap water, the EPA regulates the amount of contaminants allowed in public drinking water. The FDA regulates the contaminants in bottled water, which must provide a similar degree of safety.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's *Safe Drinking Water Hot Line* at 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the *Safe Drinking Water Hotline* at 1-800-426-4791.

Additional Information

For additional information please contact:

Redmond Public Utilities Water Quality Office
www.redmond.gov/insidecityhall/publicworks/utilities/watersystems.asp
425-556-2847

Environmental Protection Agency (EPA)
www.epa.gov/safewater
Safe Drinking Water Hotline: 1-800-426-4791

Washington Department of Health (DOH)
www.doh.wa.gov/ehp/dw
1-800-521-0323

American Water Works Association
www.drinktap.org
www.awwa.org

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GROUNDWATER UPDATE

Wells #1 and #2

Well #1 and #2 in Anderson Park have produced over **15 billion gallons** of drinking water since 1952. It would take about $36 million in today's dollars to buy that much water.

Well #3

Built in 1969 off Avondale Road, Well #3 is scheduled for renovation in 2007, followed by the renovation of the Anderson Park wells.

Well #4

Studies, approved by DOH, have found a possible remedy for a slightly elevated manganese level at Well #4. A sequestering agent added to the water has significantly reduced customer complaints about staining and discolored water. Testing and monitoring will continue for the foreseeable future.

Well #5

Well #5, located near Target and Home Depot, is in the process of being rebuilt. New and safer technologies will allow us to meet new regulation requirements and maximize our water right. Well #5, our biggest producer, will be back in operation late in 2006.

Well #4, located at the City of Redmond Municipal Campus.

Want To Get Involved?

It's your drinking water and your input is important. Attend and comment at City Council meetings on the first and third Tuesday of the month at 7:30 pm in the Council Chambers, located at 15670 NE 85th St. Agendas for the meetings can be found on the City's website at *www.redmond.gov* or posted in the lobbies of City Hall and the Public Safety Building.

If you have questions about this report or about your drinking water, call or email Tom Fix, Senior Drinking Water Analyst at (425) 556-2847 or tfix@redmond.gov.

Este informe contiene informacion muy importante sobre su aqua beber. Traduzcalo o hable con alguien que lo entienda bien.

"本报告含有饮用水问题的重要信息. 请人翻译或与懂英文的人交流一下."

이 보고서에는 식수에 관한 중요한 정보가 담겨있습니다

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